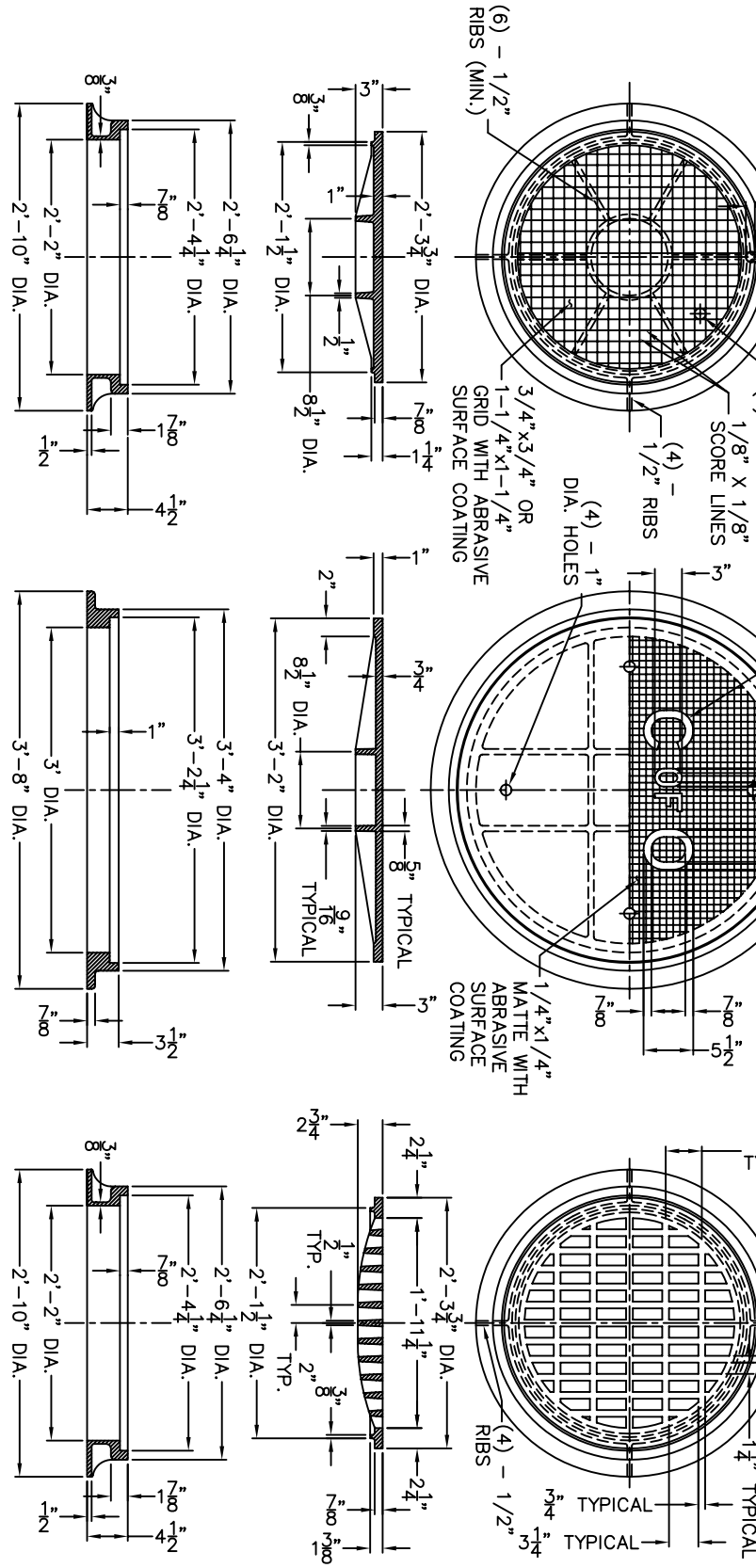


- GENERAL NOTES**
1. PRECAST CONCRETE SHAFT IS OPTIONAL WHEN "D" IS 4'-0" OR GREATER.
 2. ALL CONTACT AND BEARING SURFACES OF BOTH FRAME AND COVER SHALL BE MACHINED TO FIT ACCURATELY.
 3. CONVERSION TO METRIC EQUIVALENTS SHALL BE IN ACCORDANCE WITH ASTM A-380.
 4. SHAFT OPENING FOR TYPE "H" FRAMES AND COVERS SHALL BE 2'-0" DIAMETER.
 5. STEPS SHALL BE 3/4" DIAM. HOT DIPPED GALVANIZED STEEL ROD OR FIBERGLASS. SEE SHEET D-11 FOR STEP DETAILS.
 6. ALL STEEL A305 REINFORCING STEEL NO. 4 BARS.
 7. REINFORCING STEEL MAY BE SPREAD TO ADMIT SMALL PIPES ENTERING MANHOLE SIDES.
 8. WHERE TWO SIZES OF PIPE ENTER AND LEAVE A MANHOLE, USE DIMENSIONS AND QUANTITIES FOR THE LARGER SIZE PIPE.

FRAME AND COVER DETAILS



INSIDE DIAMETER OF PIPE CONDUIT	MANHOLE DIMENSIONS				CUBIC YARDS OF CONCRETE	"A" BAR		"B" BAR		"C" BAR		"D" BAR		"E" BAR		"F" BAR		"G" BAR		LBS OF REINFORCING STEEL	
	W	X	Y	Z		NO.	LENGTH	NO.	LENGTH	NO.	LENGTH	NO.	LENGTH	NO.	LENGTH	NO.	LENGTH	NO.	LENGTH		
36"	5'-6"	4'-9"	6"	6"	2.88	7	14'-0"	4	7'-8"	17	5'-2"			2	6'-10"					153.8	
39"	5'-6"	5'-1/2"	4 1/2"	4 1/2"	2.93	7	14'-7"	4	7'-4"	19	5'-2"			2	6'-10"					164.0	
42"	5'-6"	5'-4"	3"	3"	2.97	7	15'-2"	4	7'-0"	19	5'-2"			2	6'-10"					164.4	
45"	5'-6"	5'-7 1/2"	1 1/2"	1 1/2"	3.00	7	15'-9"	4	6'-8"	19	5'-2"			2	6'-10"					166.5	
48"	4'	5'-10"	6'-2"	2"	3.30	7	17'-2"	4	7'-0"	19	5'-2"	2	5'-6"	2	6'-10"					181.1	
51"	7'	6'-1"	6'-5 1/2"	2"	3.60	7	18'-0"	4	7'-2"	19	5'-2"	2	5'-9"	2	6'-10"			SEE "E" BAR	5	2'-9"	193.9
54"	10'	6'-4"	6'-9"	2"	3.80	7	18'-10"	4	7'-5"	23	5'-2"	2	6'-0"	1	6'-10"	2	2'-9"	5	3'-0"	206.9	
57"	1'-1"	6'-7"	7'-1 1/2"	2"	4.10	7	19'-8"	4	7'-7"	23	5'-2"	2	6'-3"	1	6'-10"	2	3'-4"	5	3'-3"	213.2	
60"	1'-4"	6'-10"	7'-4"	2"	4.20	7	20'-6"	4	7'-10"	23	5'-2"	2	6'-6"	1	6'-10"	2	3'-9"	5	3'-6"	219.5	
63"	1'-7"	7'-1"	7'-7 1/2"	2"	4.50	7	21'-4"	4	8'-1"	25	5'-2"	2	6'-9"	1	6'-10"	2	4'-1"	5	3'-9"	239.2	
66"	1'-10"	7'-4"	7'-11"	2"	4.90	7	22'-2"	4	8'-3"	25	5'-2"	2	7'-0"	1	6'-10"	2	4'-5"	5	4'-0"	245.3	
69"	2'-1"	7'-7"	8'-2 1/2"	2"	5.20	7	23'-0"	4	8'-5"	26	5'-2"	2	7'-3"	1	6'-10"	2	4'-9"	5	4'-3"	254.6	
72"	2'-4"	7'-10"	8'-6"	2"	5.30	7	23'-10"	4	8'-8"	28	5'-2"	2	7'-6"	1	6'-10"	2	5'-1"	5	4'-6"	267.7	
75"	2'-7"	8'-1"	8'-9 1/2"	2"	5.70	7	24'-8"	4	8'-11"	28	5'-2"	2	7'-9"	1	6'-10"	2	5'-4"	5	4'-9"	273.7	

NOTE: THIS PLAN IS NOT A LEGAL ENGINEERING DOCUMENT BUT AN ELECTRONIC DUPLICATE. THE SIGNED CITY OF OAKLAND STANDARD DETAILS FOR PUBLIC WORKS CONSTRUCTION IS AVAILABLE FOR PURCHASE FROM THE CONTRACT ADMINISTRATION DEPARTMENT.

CITY OF OAKLAND

DESIGN AND CONSTRUCTION SERVICES DEPARTMENT

MANHOLE TYPE 2
(FOR 36" TO 75" DIA. PIPE CONDUIT)

ENGINEERING DESIGN MANAGER
DATE: FEBRUARY 2002
REV. DATE: _____
DRAWING
D-112